AMENDMENTS TO THE CLAIMS:

1-39. (canceled)

40. (Previously presented) The method of Claim 60, further comprising roughening at least a region of the surface of the implantable medical device prior to applying the coating.

41. (Previously presented) The method of Claim 60, further comprising applying a primer on the surface of the implantable medical device prior to applying the coating.

42. (Previously presented) The method of Claim 41, wherein the primer is made of a material selected from a group consisting of ethylene vinyl alcohol copolymer, polycystine, polylysine, and reactive silanes, the reactive silanes comprising trimethoxysilane.

43. (Previously presented) The method of Claim 41, further comprising roughening at least a region of the surface of the implantable medical device prior to applying the primer.

44. (Previously presented) The method of Claim 41, further comprising heat-treating the coating.

45. (Previously presented) The method of Claim 41, wherein the primer contains at least one chlorosilane compound.

46. (Previously presented) The method of Claim 45, wherein the chlorosilane compound has a functional head.

47. (Previously presented) The method of Claim 46, wherein the functional head comprises an unsaturated group, an amino group, or a carboxyl group.

48. (Previously presented) The method of Claim 60, wherein the complex of heparin is DURAFLO an ionically bound heparin.

49. canceled.

50. (Previously presented) The method of Claim 62, wherein the adhesion enhancer is selected from a group consisting of poly(ethylene glycol), poly(ethylene oxide), poly(vinylpyrrolidone), poly(vinyl alcohol), poly(caprolactone), poly(glycolic acid), hyaluronic acid, polyurethanes, copolymers of caprolactone and glycolic acid, copolymers of caprolactone and ethylene glycol, segmented polyurethanes, and mixtures thereof.

51. (Previously presented) The method of Claim 62, wherein the coating is performed by dip coating or spraying.

52. (Previously presented) The method of Claim 62, further comprising roughening at least a region of the surface of the device prior to coating.

53. (Previously Presented) A method of coating a stent comprising:

a) roughening at least a region of the surface of the stent; and

b) applying a coating to the stent, the coating containing a complex of heparin with an aromatic quaternary ammonium ion dispersed in a polymer selected from ethylene vinyl alcohol copolymer, poly(ethylene glycol), poly(ethylene oxide), poly(vinylpyrrolidone), poly(vinyl alcohol), poly(caprolactone), poly(glycolic acid), hyaluronic acid, polyurethanes, copolymers of caprolactone and glycolic acid, copolymers of caprolactone and ethylene glycol, segmented polyurethanes, and mixtures thereof.

54. (Previously presented) The method of Claim 53, further comprising heat-treating the coating.

55. (Previously presented) The method of Claim 54, wherein the heat-treating is conducted within a temperature range of about 50°C to about 100°C.

56. (Previously presented) The method of Claim 53, wherein the roughening is performed by argon plasma etching.

57. (Previously presented) The method of Claim 53, further comprising applying a primer on the surface of the stent prior to applying the coating.

58. (Previously Presented) A method of coating a stent, the method comprising:

a) applying a coating to the stent, the coating containing a complex of heparin with an aromatic quaternary ammonium ion dispersed in a polymer selected from ethylene vinyl alcohol copolymer, poly(ethylene glycol), poly(ethylene oxide), poly(vinylpyrrolidone), poly(vinyl alcohol), poly(caprolactone), poly(glycolic acid), hyaluronic acid, polyurethanes, copolymers of caprolactone and glycolic acid, copolymers of caprolactone and ethylene glycol, segmented polyurethanes, and mixtures thereof; and

b) heat-treating the coating.

59. (Previously presented) The method of Claim 58, wherein the heat-treating is conducted within a temperature range of about 50°C to about 100°C.

60. (Previously Presented) A method of coating an implantable medical device wherein the method comprises applying a first coating to the device wherein the first coating:

a) increases the biocompatibility and hemocompatibility of the blood-contacting surface;

b) is adapted to deliver therapeutic amounts of therapeutic drugs into the blood;

c) comprises an adhesion enhancer; and

d) comprises at least one of therapeutic drug wherein therapeutic drug includes:

i) heparin and

ii) heparin derivatives, and

wherein the step of applying comprises providing a solution comprising at least one therapeutic drug and the adhesion enhancer.

61. (Previously presented) The method of Claim 60 wherein the implantable medical device is a stent.

62. (Previously Presented) A method of coating an implantable medical device wherein the method comprises applying a coating to the device wherein the coating:

a) increases the biocompatibility and hemocompatibility of the blood-contacting surface and

b) is adapted to deliver therapeutic amounts of therapeutic drugs into the blood;

c) comprises at least one of therapeutic drug wherein therapeutic drug includes:

i) heparin and

ii) heparin derivatives; and

iii) at least one adhesion enhancer, and

wherein the step of applying comprises providing a solution comprising at least one therapeutic drug and the adhesion enhancer.

63. (Previously presented) The method of Claim 60 further comprising applying at least one additional coating wherein the additional coating or coatings are the same as or different from the first coating and the additional coating(s)

a) increase the biocompatibility and hemocompatibility of the blood-contacting surface;

b) are adapted to deliver therapeutic amounts of therapeutic drugs into the blood;

c) comprise a polymeric adhesion enhancer; and

d) comprise at least one of the therapeutic drugs wherein therapeutic drugs include:

i) heparin and

ii) heparin derivatives.

64-77. (canceled).

78. (Previously presented) A method of coating a blood-contacting surface with a heparin-containing compound comprising:

a) providing a formulation containing at least one heparin-containing compound and at least one adhesion enhancer; and,

b) coating the surface with the formulation,

wherein the formulation is adapted to deliver therapeutic amounts of heparin-containing compounds into the blood.

79. (Previously presented) A method as in Claim 78 wherein the at least one adhesion enhancer is selected from the group consisting of polyethylene glycol, polyethylene oxide, polyvinylpyrrolidone, polyvinyl alcohol, polycaprolactone, polyglycolic acid, ethylene vinyl alcohol copolymer, hyaluronic acid, polyurethanes, copolymers of polycaprolactone and polyglycolic acid, copolymers of polycaprolactone and polyethylene glycol, segmented polyurethanes and mixtures thereof.

80. (Previously presented) A method as in Claim 79 wherein the coating is performed by dip coating.

81. (Previously presented) A method as in Claim 78 further comprising roughening the surface prior to coating.

82-84. (canceled).

85. (Previously presented) A method of coating a blood-contacting surface with a heparin-containing compound comprising:

a) roughening the surface prior to coating; and,

b) coating the surface with a heparin-containing compound; and,

c) baking the surface and the coating thereon sufficient to affix the coating to the surface

wherein the coating is adapted to deliver therapeutic amounts of heparin-containing compounds into the blood.

86. (Previously presented) A method as in Claim 85 wherein the baking is at a temperature from approximately 50 degree C to approximately 100 degree C.

87. (Previously presented) A method as in Claim 85 wherein the coating is performed by dip coating.

88. (Previously presented) A method as in Claim 85 wherein the roughening is performed by argon plasma etching.

89-99. (canceled).

100. (Previously Presented) A method of coating a stent wherein the method comprises

a) applying a coating to the stent, the coating containing a complex of heparin with a quaternary ammonium ion dispersed in a polymer selected from ethylene vinyl alcohol copolymer, poly(ethylene glycol), poly(ethylene oxide), poly(vinylpyrrolidone), poly(vinyl alcohol), poly(caprolactone), poly(glycolic acid), hyaluronic acid, polyurethanes, copolymers of caprolactone and glycolic acid, copolymers of caprolactone and ethylene glycol, segmented polyurethanes, and mixtures thereof; and

b) heat-treating the coating,

wherein the quaternary ammonium ion has four R-groups, one is a 7-to-18-carbon-atom alkyl group and three are independently hydrogen, a 1-to-18-carbon-atom alkyl group, or a 7-to-18-carbon-atom aryl group.

101. (Previously Presented) A method of coating a stent comprising applying a coating to the stent, the coating containing a complex of heparin with a quaternary ammonium ion dispersed in a polymer selected from ethylene vinyl alcohol copolymer, poly(ethylene glycol), poly(ethylene oxide), poly(vinylpyrrolidone), poly(vinyl alcohol), poly(caprolactone), poly(glycolic acid), hyaluronic acid, polyurethanes, copolymers of caprolactone and glycolic acid, copolymers of

caprolactone and ethylene glycol, segmented polyurethanes, and mixtures thereof, and

wherein the quaternary ammonium ion is at least one of benzalkonium; cetypyridinium; benzyl dimethyl stearyl ammonium; ions containing vinyl pyridines; ions containing vinyl pyridine and a benzyl group; ammonium ions containing a 7-18-carbon-atom aryl group; ammonium ions containing phenyl, benzyl, phenyl substituted with halogen, vinyl, or 1-4 carbon alkyl group, benzyl substituted with halogen, vinyl, or 1-4 carbon alkyl group; tridodecy benzyl ammonium; benzyl-trimethylammonium; p-chlorobenzyltrimethylammonium; benzyl-vinylbenzyl-dimethylammonium; dibenzylmethyl-vinylbenzylammonium; tetraphenylammonium; dibenzyldimethylammonium; butyl benzyl-trimethylammonium; tribenzyl-methylammonium; and ions from toluidine blue, imidazole, pyridine, 3-amino-cinnoline, 2-amino thiazole, purine, 4-ureidosulphonylaniline, 2-ethoxycarbonyl aniline, 3-amino biphenyl, 2-amino-4,6-dimethylpteridine, 2-amino-6,7-dimethylpteridine, 2-aminoquinoxaline, 2,3-diaminoquinoxaline, triazole, 2-amino pyrimidine, 5-amino-4-methyl pyridine, 1-phenyl pyrrolidine, methylindanyl amino indane, N-methyl-1,4-benzoquinone imine, 1,4-benzoquinone imine, N-benzyl-1,4-benzoquinone imine, Thioflavine T, N-methyl cytidine, biliverdine, and Rhodamine B.